SIEMENS

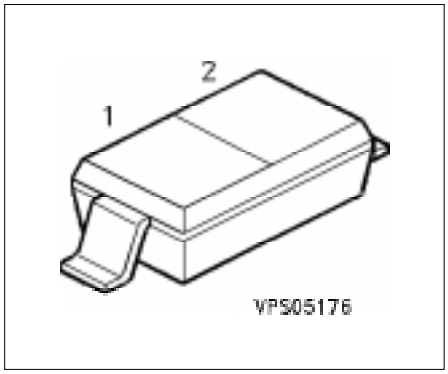
Silicon Tuning Diode

BB 835

Preliminary data

Features

- Extended frequency range up to 2.8 Ghz ; special design for use in TV-sat indoor units
- High capacitance ratio



Type	Marking	Ordering Code (tape and reel)	Pin Configuration 1		2	Package
BB 835	yellow X	Q62702-B802	C		A	SOD-323

Maximum Ratings

Parameter	Symbol	Values	Unit
Reverse voltage	V_R	30	V
Reverse voltage ($R \geq 5$ kΩ)	V_{RM}	35	V
Forward current	I_F	20	mA
Operating temperature range	T_{OP}	– 55… +150	°C
Storage temperature range	T_{stg}	– 55… +150	°C

Thermal Resistance

Junction - ambient [1)]	$R_{th\ JA}$	≤ 450	K/W

[1)] For detailed informatioon see chapter Package Outline

Electrical Characteristics

at T_A = 25 °C, unless otherwise specified.

Parameter	Symbol	Value			Unit
		min.	typ.	max.	
DC Characteristics					
Reverse current V_R = 30 V V_R = 30 V, T_A = 85 °C	I_R	 – –	 – –	 10 200	nA
Diode capacitance V_R = 1 V, f = 1 MHz V_R = 28 V, f = 1 MHz	C_T	 8.5 0.5	 9.1 0.62	 10 0.75	pF
Capacitance ratio V_R = 1 V, 28 V, f = 1 MHz	C_{T1}/C_{T28}	 13.5	 14.7	 –	–
Capacitance matching V_R = 1…28 V, f = 1 MHz	$\Delta C_T/C_T$	 –	 –	 3	%
Series resistance V_R = 1 V, f = 470 MHz	r_S	 –	 2.4	 –	Ω
Series inductance	L_S	–	1.4	–	nH

Diode capacitance $C_T = f(V_R)$

f = 1 MHz.